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REPORT NEW DEVELOPMENTS IN CEMENT INDUSTRY

SUGGEST USE OF LOCAL RAW MATERIALS -- Leninskoye Znamya, No 97, 16 May 50

With the growth of construction in the Karelo-Finnish SSR, a shortage of locally manufactured binding materials, including lime, cement, etc., has been noticeable. At present, construction projects are supplied with binding materials shipped from other republics and oblasts.

Until recently, it was generally considered that Karelia had no resources of rocks suitable as raw materials for the production of lime and cement. However, geological data show that it is entirely possible to organize production of binding materials in the Karelo-Finnish SSR on the basis of local raw materials. Local resources have not been utilized for this purpose partly because builders prefer to use the old familiar types of binding materials, such as fat air-slaked lime and standard Portland cement -- products for which there is still a shortage of raw materials in Karelia. Another reason for nonexploitation of local resources is that the dolomites and dolomitized limestones abundant in Karelia have not been investigated sufficiently. These rocks could be the source of a local industry of binding construction materials.

Modern technology has made great progress in the production of dolomitic lime. In Leningrad Oblast, for example, extensive use has been made of magnesian and dolomitic lime manufactured from carbonate rocks very similar to the magnesian and dolomitic rocks of the Karelo-Finnish SSR. The new technological method developed by Engineer Smirnov for producing dolomitic lime in the form of a ground powder made it possible to utilize this binding material, without any waste products in the slaking process.

The Karelo-Finnish SSR has sufficient natural resources for the production of various types of cement. There are a number of large deposits of clay in the central and southern parts of Karelia, which are now being used only for brick production but could be utilized in the production of clay-cement. A substitute for clay in cement production would be Nigozero clay shale, found in many regions of Karelia and now used only as facing material.

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Karelia has deposits of other rocks, such as diatomite and volcanic tuff, which can be used in the cement industry as hydraulic admixtures to improve the quality of cement. Unfortunately, these rocks have not been investigated at all as a possible source of raw material for cement production.

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Pegmatites are also of considerable interest for the production of a special type of cement with a high silica content, called feldspar cement. The reserves of pegmatites in Karelia, suitable for this type of cement production, are practically inexhaustible.

ESTONIAN SHALE USED AS FUEL IN CEMENT PLANT -- Promyshlennost' Stroitel'nykh Materialov, No 14, 31 Mar 50

The "Punane-Kunda" Plant in Kunda, Estonian SSR, is the only enterprise of the cement industry which uses shale for clinker firing. The results of 30 years' experience in using shale as an industrial fuel have been very favorable. The plant's furnaces operate on fine third-grade oil shale which is easily available, as a waste product of the shale-mining industry. The plant receives shale with an ash content of 63 to 64 percent, and a calorific value of 2,900 to 3,100 calories per kilogram. The finely ground shale is blown into rotary furnaces. Because of its relatively low calorific value, a much larger quantity of fuel is necessary than in the case of coal. The shale ash, acting as a flux, facilitates the formation of clinker.

The use of shale as an industrial fuel requires the expansion of warehouses, drying and grinding installations. Nevertheless, it is profitable in every respect to build a cement plant next to a shale deposit.

UNSLAKED LIME RECOMMENDED FOR CONSTRUCTION -- Pravda Ukrainy, No 118, 20 May 50

The Administration of Industrial Cooperatives, Council of Ministers RSFSR, has decided to make extensive use of unslaked ground lime in construction. Unslaked lime, in the form of powder, has greater binding properties and may be compared to cement.

SPECIALISTS TO BE TRAINED FOR CEMENT INDUSTRY -- Kommunist Tadzhikistana, No 71, 9 Apr 50

During 1950, faculties for cement technology are to be opened at the Ural, Tomsk, Novocherkassk and L'vov polytechnical institutes and at the Leningrad Technological Institute imeni Lensoviet. A similar chair will be established at the Moscow Chemicotechnological Institute imeni D. I. Mendeleyev.

Mechanical engineers serving as specialists for cement-plant machinery will be trained in six of the largest higher technical schools in Leningrad, Kiev, Kharkov, and other cities. The Sverdlovsk Mining Institute and the Novocherkassk, Kiev and Central Asian polytechnical institutes are planning to train engineers for the mining of nonmetallic mineral deposits.

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